

CURRENT LISTING OF THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

- 1 1. (Previously Presented) A system for use in a well, comprising:  
2 a plurality of wireless network devices in the well, the plurality of wireless network  
3 devices in the well to communicate wirelessly using a protocol that defines  
4 short-range wireless communication.
- 1 2. (Previously Presented) A system for use in a well, comprising:  
2 a plurality of wireless network devices in the well, the plurality of wireless network  
3 devices to communicate wirelessly using a Bluetooth wireless communication  
4 protocol.
- 1 3. (Original) The system of claim 1, further comprising:  
2 an interlink wireless network device positioned proximal the surface of the well;  
3 a communication line interconnecting the interlink wireless network device to a surface  
4 controller.
- 1 4. (Previously Presented) The system of claim 1, further comprising:  
2 at least one of the wireless network devices communicating with a downhole device.
- 1 5. (Previously Presented) The system of claim 4, wherein the downhole device is selected  
2 from gauges, sensors, valves, sampling devices, a device used in intelligent or smart well  
3 completion, temperature sensors, pressure sensors, flow-control devices, flow rate  
4 measurement devices, oil/water/gas ratio measurement devices, scale detectors, actuators,  
5 locks, release mechanisms, equipment sensors, vibration sensors, sand detection sensors,  
6 water detection sensors, data recorders, viscosity sensors, density sensors, bubble point  
7 sensors, composition sensors, resistivity array devices and sensors, acoustic devices and  
8 sensors, other telemetry devices, near infrared sensors, gamma ray detectors, H<sub>2</sub>S  
9 detectors, CO<sub>2</sub> detectors, downhole memory units, downhole controllers, perforating  
10 devices, shape charges, firing heads, and locators.

- 1 6. (Previously Presented) The system of claim 1, further comprising:  
2 at least one of the wireless network devices in communication with a power source.
- 1 7. (Original) The system of claim 6, wherein the power source is selected from a battery, a  
2 fuel cell, a downhole power generator, and a communication line extending to a surface  
3 of the well.
- 1 8. (Previously Presented) The system of claim 2, further comprising:  
2 at least one of the wireless network devices positioned in a lateral branch of a multilateral  
3 well.
- 1 9. (Previously Presented) The system of claim 2, wherein:  
2 a first of the wireless network devices is positioned in a lateral branch of a multilateral  
3 well;  
4 a second of the wireless network devices is positioned outside the lateral branch in  
5 another portion of the well;  
6 the first wireless network device and second wireless network device positioned within  
7 range of one another.
- 1 10. (Previously Presented) The system of claim 2, further comprising:  
2 a wireless network device in a wellhead of the well to communicate wirelessly with at  
3 least one of the wireless network devices in the well using the Bluetooth wireless  
4 communication protocol.
- 1 11. (Previously Presented) The system of claim 10, further comprising:  
2 a wireless network device outside the well adapted to communicate wirelessly with at  
3 least one of the wireless network devices in the wellhead.
- 1 12. – 13. (Cancelled)

- 1 14. (Previously Presented) The system of claim 1, further comprising:  
2 a wireless network device outside the well adapted to communicate wirelessly with at  
3 least one of the wireless network devices in the well using the protocol.
- 1 15. (Cancelled)
- 1 16. (Previously Presented) The system of claim 2, further comprising at least one secondary  
2 communication system in communication with the at least one of the wireless network  
3 devices.
- 1 17. (Original) The system of claim 16, wherein the secondary communication system is  
2 selected from communication line, a fiber optic line, an Internet, a satellite, a telephone  
3 system, and an intranet.
- 1 18. (Original) The system of claim 16, wherein the at least one secondary communication  
2 system provides communication between the at least one wireless network device and a  
3 location selected from a remote land-based location and an offshore surface location.
- 1 19. (Previously Presented) The system of claim 2, wherein:  
2 a first one of the wireless network devices is positioned outside a casing in the well;  
3 a second one of the wireless network devices is positioned inside the casing of the well;  
4 the first wireless network device and the second wireless network device adapted to  
5 communicate wirelessly with one another.
- 1 20. (Original) The system of claim 19, further comprising:  
2 a memory device communicating with the first wireless network device.
- 1 21. (Original) The system of claim 19, wherein:  
2 the second wireless network device is mounted in the well.

1 22. (Original) The system of claim 19, further comprising:  
2 the second wireless network device is provided on a running tool.

1 23. (Previously Presented) The system of claim 1, wherein:  
2 a first of the wireless network devices is positioned outside a tubing in the well;  
3 a second of the wireless network devices is positioned inside the tubing of the well;  
4 the first wireless network device and the second wireless network device adapted to  
5 communicate wirelessly with one another.

1 24. (Original) The system of claim 23, further comprising:  
2 a memory device communicating with the first wireless network device.

1 25. – 27. (Cancelled)

1 28. (Previously Presented) The system of claim 23, further comprising:  
2 at least a portion of the tubing extends through a casing in the well;  
3 a third of the wireless network devices positioned inside the casing of the well;  
4 the first wireless network device, the second wireless network device, and the third  
5 wireless network device are adapted to communicate wirelessly with one another.

1 29. (Original) The system of claim 28, wherein:  
2 the first wireless network device relays information between the second wireless network  
3 device and the third wireless network device.

1 30. – 32. (Cancelled)

1 33. (Previously Presented) A system comprising:  
2 a tool having a first wireless network device, the tool movable in the well;  
3 at least a second wireless network device in the well located at a predetermined position  
4 therein;  
5 a depth correlation circuitry in the tool in communication with the first wireless network  
6 device in the tool to detect a signal from the first wireless network device for  
7 determining the depth of the tool in the well, the signal from the first wireless  
8 network device based on wireless communication between the first and second  
9 wireless network devices; and  
10 a third wireless network device in the well;  
11 wherein the signal is based on triangulation among the first, second, and third wireless  
12 network devices.

1 34. – 38. (Cancelled)

1 39. (Previously Presented) A method for use in a well, comprising:  
2 providing plural wireless network devices in the well; and  
3 the plural wireless network devices communicating wirelessly using a protocol that  
4 defines short-range wireless communication.

1 40. (Previously Presented) A method for use in a well, comprising:  
2 providing a plurality of wireless network devices in the well; and  
3 the plurality of wireless network devices communicating wirelessly using a Bluetooth  
4 wireless communication protocol.

1 41. (Previously Presented) The method of claim 39, further comprising:  
2 communicating with a downhole device via at least one of the wireless network devices.

1 42. (Previously Presented) The method of claim 39, further comprising:  
2 powering at least one of the wireless network devices with a downhole power source.

- 1 43. (Previously Presented) The method of claim 40, further comprising:  
2 telemetering data in a multilateral well using the wireless network devices.
- 1 44. (Previously Presented) The method of claim 39, further comprising:  
2 telemetering data from the well to a position outside the well using at least one of the  
3 wireless network devices.
- 1 45. (Previously Presented) The method of claim 40, further comprising:  
2 telemetering data from through a casing using at least one of the wireless network  
3 devices.
- 1 46. (Previously Presented) The method of claim 40, further comprising:  
2 telemetering data from through a tubing using at least one of the wireless network  
3 devices.
- 1 47. (Previously Presented) The method of claim 40, further comprising:  
2 storing information downhole;  
3 transferring the stored information to a running tool via at least one of the wireless  
4 network devices.
- 1 48. (Previously Presented) The method of claim 47, further comprising:  
2 determining the depth of a tool in the well using at least one of the wireless network  
3 devices.
- 1 49. (Previously Presented) The method of claim 40, further comprising:  
2 actuating a tool in the well using at least one of the wireless network devices.
- 1 50. (Cancelled)

- 1 51. (Original) A system for use in a well, comprising:  
2 a first device positioned in the well;  
3 a second device remotely located with respect to the first device;  
4 means for transferring data between the first device and the second device using short-  
5 range wireless communication operating without the need for a central network.
- 1 52. (Previously Presented) A subsea networking system, comprising:  
2 a wireless network device positioned in a subsea structure;  
3 a subsea vehicle having a wireless network device therein that is adapted to communicate  
4 based on a radio frequency wireless protocol with the wireless network device  
5 positioned in the subsea structure.
- 1 53. (Previously Presented) The system of claim 52, wherein:  
2 the subsea structure is selected from a wellhead, a subsea processing device, a power  
3 generation device and a subsea monitor.
- 1 54. (Previously Presented) The system of claim 52, wherein:  
2 the subsea vehicle is selected from an ROV and a AUV.
- 1 55. (Previously Presented) A subsea telemetry system, comprising:  
2 a wireless network device positioned proximal the sea floor;  
3 a subsea vehicle having a wireless network device therein that is adapted to communicate  
4 based on a radio frequency wireless protocol with the wireless network device  
5 positioned proximal the sea floor.

1 56. (Previously Presented) A subsea telemetry system, comprising:  
2 a wireless network device positioned proximal the sea floor;  
3 a subsea vehicle having a wireless network device therein that is adapted to communicate  
4 with the wireless network device positioned proximal the sea floor; and  
5 a guidance circuitry of the subsea vehicle in communication with the wireless network  
6 device of the subsea vehicle, the guidance circuitry adapted to determine the  
7 relative position of the subsea vehicle based upon input from the interconnected  
8 wireless network device.

1 57. (Cancelled)

1 58. (Previously Presented) A system for use in a well, comprising:  
2 a tool containing a first wireless network device, the tool movable in the well during a  
3 downhole operation;  
4 a second wireless network device for location in the well,  
5 wherein the first wireless network device is outside a wireless communication range of  
6 the second wireless network device until the tool is moved into proximity of the  
7 second wireless network device,  
8 the second wireless network device to transmit a location code to the first wireless  
9 network device.

1 59. (Previously Presented) The system of claim 61, wherein the tool includes a depth  
2 correlation device to correlate a position of the tool based on wireless communication  
3 between the first and second wireless network devices.



1    60.    (Previously Presented) A system for use in a well, comprising:  
2           a tool containing a first wireless network device, the tool movable in the well during a  
3           downhole operation;  
4           a second wireless network device for location in the well,  
5           wherein the first wireless network device is outside a wireless communication range of  
6           the second wireless network device until the tool is moved into proximity of the  
7           second wireless network device; and  
8           at least another wireless network device for location in the well, the first wireless network  
9           device to perform triangulation of signals to determine relative position of the tool  
10           to the second wireless network device and the at least another wireless network  
11           device.

1    61.    (Previously Presented) A system for use in a well, comprising:  
2           a tool containing a first wireless network device, the tool movable in the well during a  
3           downhole operation;  
4           a second wireless network device for location in the well,  
5           wherein the first wireless network device is outside a wireless communication range of  
6           the second wireless network device until the tool is moved into proximity of the  
7           second wireless network device,  
8           the second wireless network device to send an actuating signal to the first wireless  
9           network device for actuating the tool once the tool comes within range of the  
10           second wireless network device.

1    62.    (Previously Presented) The system of claim 61, wherein the tool comprises a perforating  
2           gun, and the actuating signal comprises a firing signal to fire the perforating gun.

1    63.    (Previously Presented) The system of claim 61, wherein the tool comprises a valve  
2           actuated by the actuating signal.

1    64.    (Previously Presented) The system of claim 61, wherein the tool comprises a release  
2           mechanism that releases sensors from the tool in response to the actuation signal.

- 1 65. (Previously Presented) The system of claim 61, wherein the tool comprises a sampler to  
2 take a sample in response to the actuating signal.
- 1 66. (Previously Presented) The system of claim 61, wherein the tool comprises a recorder  
2 that starts recording in response to the actuating signal.
- 1 67. (Previously Presented) The system of claim 1, wherein the protocol comprises a  
2 Bluetooth protocol.
- 1 68. (Previously Presented) The method of claim 39, wherein communicating wirelessly  
2 using the protocol comprises communicating wirelessly using a Bluetooth protocol.
- 1 69. (Previously Presented) The system of claim 51, wherein the short-range wireless  
2 communication is according to a Bluetooth protocol.